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ABSTRACT

This study identified and described the ways in which negative evidence was made available and accessible to learners during two widely practiced classroom activities. One was a teacher-led discussion that emphasized communication of subject matter content. The other was a teacher-led sentence construction exercise that focused on application of grammatical rules. Data were collected on adult, pre-academic English language learners during six discussions that centered on reactions to American film and literature and six sets of exercises that required construction of individual sentences. Findings revealed little availability of negative evidence in the content-based discussions. Responses to students were primarily topic related back-channels and continuation moves, as their fluent, multi-error texts on content topics appeared to limit obvious opportunities for provision of negative evidence. Much greater availability and accessibility of negative evidence were found in the sentence construction exercises. Responses informed students of their inaccuracies, as the words and phrases they supplied in completing individual sentences set up conditions for followup evaluation of their accuracy. (Contains 58 references.) (SM)

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Negative Evidence in Language Classroom Activities: A Study of its Availability and Accessibility to Language Learners

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The following study was motivated by theoretical interest in second language learners' need for negative evidence in helping them notice differences between their developmental errors and target L2 features. The study sought to identify and describe the ways in which negative evidence was made available and accessible to learners during two widely practiced classroom activities. One was a teacher-led discussion, which emphasized communication of subject matter content, and the other, a teacher-led sentence construction exercise, which focused on application of grammatical rules. Empirical support for negative evidence has come mainly from interventions that provide negative evidence to learners through responses devoted exclusively to feedback on their errors. Questions remain, however, as to whether negative evidence can be made available and accessible during classroom activities, as responses to learners serve a wide range of purposes, not all of which relate to error feedback.

Data for the study were collected on adult, pre-academic English language learners during six discussions that centered on reactions to American film and literature, and six sets of exercises that required construction of individual sentences. Findings revealed little availability of negative evidence in the content-based discussions. Responses to students were primarily topic related back-channels and continuation moves, as their fluent, multi-error texts on content topics appeared to limit obvious opportunities for provision of negative evidence. Much greater availability and accessibility of negative evidence were found in the sentence construction exercises. Responses informed students of their inaccuracies, as the words and phrases they supplied in completing individual sentences set up conditions for follow up evaluation of their accuracy.

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The paucity of negative evidence on errors during the discussions reflected current concerns as to the limitations of communicative, meaning focused activities in helping students to access negative evidence on their errors (see Lightbown & Spada 1990, 1997; Long 1996; Lyster & Ranta 1997). The success of the sentence construction activity in providing students with negative evidence on their sentence errors was offset by its limited opportunities for meaningful input and production of output. Results from the study of both activities suggested several pedagogical implications and applications.

Input and Evidence in Second Language Learning

That second language (L2) learners need input for their learning is fundamental to second language acquisition theory and language pedagogy. Research over the past two decades has addressed questions about the exact form and content of the input that learners need, and its degrees of frequency and timing in the learning process (see Ellis 1994; Gass & Selinker 1994; Lightbown & Spada 1990; Long 1996; Pica 1994; Swain 1995 for syntheses of this work). More recently, new questions have emerged about the kinds of input needed by second language (L2) learners to achieve a successful L2 outcome. Long (in Long 1996 and in Long, Inagaki, & Ortega 1998) has addressed these questions. Drawing from first language learning theory and research (including Farrar 1990, 1992; Nelson 1977 for example) and from studies of L2 form-focused instruction (such as those of Spada & Lightbown 1993; White 1991; White, Spada, Lightbown & Ranta 1991) and experimental intervention (Oliver 1995; Richardson 1995), Long has distinguished between input that provides positive evidence of relationships of L2 form, function and meaning, and input that supplies negative evidence on forms and structures that are used by learners, but are not consistent with the L2 they are learning. The former is believed to be necessary for the process of L2 learning, but not sufficient for its mastery. The latter may be helpful in this regard.

Positive evidence of L2 words and structures can be found in responses of input in an authentic, unaltered state or in input modified for comprehensibility, as target-like productions of words or phrases might be extracted by interlocutors from their original utterances, and repeated, rephrased, defined, or embellished with examples. These modifications not only assist learners in their comprehension of L2 input, but also allow them additional, more focused, opportunities to attend to L2 forms which encode meanings and functions in the input (see also Pica 1994). It is believed that the process of L2 learning is guided primarily by the positive, linguistic evidence that these modifications provide.

As Long (1996) has pointed out, however, modified input is an insufficient source of evidence for learners, who might not notice L2 forms and features that are difficult, complex, or highly similar to their L1. In addi-

tion, learners might not notice differences between target versions of L2 forms and features that are encoded in modified input and their own erroneous interlanguage versions of them. This is especially the case if they have internalized inaccurate versions of L2 forms and structures that are functionally adequate for communicative purposes (see also Doughty & Williams 1998; Schmidt 1990).

To help learners access, and eventually internalize, target versions of L2 forms and the meanings and functions they encode, it is claimed that negative evidence about what is not acceptable in the L2 can be especially useful. Such evidence can help learners notice differences between developmental features of their interlanguage and target features of the L2 (see again Schmidt 1990 for data and discussion).

Theoretically, however, the role of negative evidence in second language learning has been subject to considerable debate, especially in light of its alleged lack of necessity in first language learning (Schwartz 1993; Schwartz & Gubala-Ryzak 1992). On the basis of seminal studies in the field (see, for example, Brown & Hanlon 1970), it was claimed, for many years, that negative evidence was not even available to first language learners, or accessible to them in any systematic or usable way. As follow up research was able to reveal its availability to learners (see Bohannon & Stanowicz 1988; Hirsh-Pasek, Treiman & Schneiderman 1984), additional issues then arose as to whether children made use of such evidence, or indeed, if they needed to do so to advance their learning.

Truscott (1996), for example, has argued that it is not simply enough for negative evidence to be made available in responses to errors. It must be organized in ways that make it noticeable. That negative evidence can be made available and accessible through planned instruction and explicit corrective feedback has been documented in classroom studies (see Chaudron 1977 for research and Chaudron 1988 for a review of research, and also Allwright 1975; Fanselow 1977). In a recent classroom study, Lyster & Ranta (1997) found that the singular function of explicit feedback made it more frequently noticed by learners than other responses to their errors. However, more implicit encodings of feedback were difficult to perceive with respect to their functionality as negative evidence. As will be described below, this is one of the findings that motivated the present study.

Research has also shown that negative evidence can be made available implicitly when conversational interaction is modified by responses to learners which request greater comprehensibility, clarification, and accuracy. These responses thus carry additional functions for conversational repair which both facilitate and impede their accessibility as negative evidence. On the one hand, they make negative evidence more meaningful and contextualized for learners to notice and utilize, but on the other hand, their very meaningfulness makes them more likely to be noticed for their conversational role and content focus than for the implicit messages they convey about the learners' errors in form. Examples of explicit and implicit

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negative evidence are provided in Figure 1.

As shown in Figure 1 items (1a) - (1f), conversational responses can offer learners implicit negative evidence through statements and questions regarding the responder's need for message comprehensibility, as in (1a and 1b), clarification (1c) - (1f), and confirmation (1g). The error may be the focus of the response, as in (1c) - (1f). Often, target L2 versions of words and phrases are included, as is the case for begins in (1h) - (1i), or the learner's utterance is left intact, with only its intonation changed, as in (1g). Researchers have referred to such conversational responses as signals to achieve greater comprehensibility through the negotiation of meaning (see Gass & Varonis 1989, 1994; Long 1985, 1996; Pica 1988, 1994). When comprehensibility is not at issue, as often happens in interaction among familiar interlocutors in a classroom context, teachers may use these same signals to promote accuracy, through what has been referred to as the negotiation of form (see Lyster 1998; Lyster & Ranta 1997).

Also shown in Figure 1, other responses, such as (1h) and (1i), expand or recast utterances with errors, replacing them with L2 versions. They too, offer implicit negative evidence, alerting learners subtly to imprecisions in the meaning of their messages, as they recode erroneous forms within them and promote the negotiation of form. As such, they are subject to many more interpretations compared to the responses of (1j) - (1l), which also recode erroneous forms, but do so through explicit correction and instructional, metalinguistic input.

Some researchers have found connections between different types of responses and the learner utterances that follow them. Thus, Oliver (1995) found that recasts such as (1i) were more abundant for learner utterances that contained only one error, but utterances of negotiation of meaning, as in (1a) - (1g), were the preferred response to multi-error utterances.

Figure 1. Responses to Learner Errors

English L2 Learner	**NS English Interlocutor**
The class begin at two.	(1a) I didn't understand
	(1b) What did you say?
	(1c) What about the class?
	(1d) What happens at two?
	(1e) The class does what at two?
	(1f) It does what at two?
	(1g) The class begin at two?
	(1h) Ah the class on film begins at two
	(1i) The class begins at two
	(1j) You need to say that the class begins at two
	(1k) You need to add -s to begin
	(1l) Class is singular. So you need to make begin agree with it.

Much of what is known about negative evidence has come from experimental and quasi-experimental studies that make negative evidence available and accessible to learners by targeting emergent L2 forms and structures they have yet to master, providing responses of explicit and implicit feedback to their errors, and then tracking its usefulness in their error revision and L2 development of these forms and structures. Many of these studies were implemented under laboratory-like conditions. Others were carried out in intact classrooms with researcher intervention (see Carroll & Swain 1993; DeKeyser 1993; Mackey & Philp 1998; Oliver 1995; Richardson 1995; Williams & Evans 1998; Long, Inagaki & Ortega 1998 for the former, and Doughty & Varela 1998; Tomasello & Herron 1988, 1989; Spada & Lightbown 1993; White 1991; and White, Spada, Lightbown & Ranta 1991 for the latter).

These studies have revealed important findings on the role of negative evidence in the modification, development, and in some instances, retention, of targeted forms and structures. Thus, in studies on English language learners, Carroll & Swain (1993) found gains for dative constructions, Doughty and Varela (1998) for verb tense and aspect markers, Mackey & Philp (1996), Spada & Lightbown (1993) and White et al. (1991) for questions, White (1991) for adverb placement rules, and Williams & Evans (1998) for participial adjectives. With respect to languages other than English, Long, Inagaki, & Ortega (1998) found that negative evidence made a difference for Spanish adjective ordering and adverb placement in Japanese. Finally, in research on French language learners, Tomasello & Herron (1988, 1989) found greater learner revision of grammatical features prone to errors of English L1 transfer and overgeneralization when such errors were induced and teacher feedback was immediate.

Researchers have also documented the importance of negative evidence in the short term. Thus, Oliver (1995) and Richardson (1995) found that recasts were especially effective in helping learners to revise their utterances. Lyster & Ranta (1997) found that learners were able to uptake or show that they had noticed target features after they had been given explicit correction of their imprecisions. Pica (1985) and Pica, Holliday, Lewis, & Morgenthaler (1989) found that clarification requests to learner imprecisions had an impact on their production at both lexical and morphosyntactic levels. Similar results were found by Nobuyoshi & Ellis (1993).

In contrast to this impressive range of carefully controlled studies, studies of naturally occurring conversation, without researcher intervention, have suggested that negative evidence is not so clearly available or accessible to L2 learners (see for example, studies of conversation partner interaction by Chun, Day, Chenoweth, & Luppescu 1982; Day, Chenoweth, Chun & Luppescu 1984). Conversational responses to learners can carry identical encodings, but serve one or more purposes. The encoding of clarification and confirmation requests, for example, can be identical to that used to

seek additional content, express surprise, cope with a noisy background, or maintain conversation.

In the classroom as well, responses to target and non-target utterances often can serve more than one function or outcome. As pointed out by Lyster (1998) and Lyster & Ranta (1997), recasts have been shown to be effective signals for error revision when studied under controlled research conditions that limit their function as responses to errors. However they do not operate as consistently in classroom contexts. There they can encode a variety of pedagogical functions beyond that of offering a correct model of the students' errors. They can reinforce student contributions of accurate content, convey approval, or indicate acceptance, and thereby reduce the possibility that the learner will notice the available negative evidence. Thus, Lyster & Ranta (1997) found that classroom learners were more likely to notice or "uptake" negative evidence that was encoded in explicit corrections than in moves such as recasts, whose encoding shared functional features with other, non-corrective, reinforcement or content enhancement moves.

So far, both experimental and descriptive classroom studies on questions of negative evidence have focused on immersion and content-oriented classrooms, which are somewhat unique as in light of their dual goals for language and subject matter learning. Other communicatively oriented classrooms have been studied as well, although their focus has often been on instructional input as a whole, rather than responses to learner errors specifically (see Lightbown & Spada 1990).

To gain further insight into negative evidence in the L2 classroom, therefore, the present study focused exclusively on responses to student errors, as it compared the availability and accessibility of negative evidence in two types of classroom activities. One was a communicatively oriented activity, where the emphasis was on discussion of film and literature course topics. The other was a grammar-based exercise, designed to assist students in their grammar rule learning and formal accuracy.

If negative evidence is as helpful to L2 learning as experimental and intervention studies have indicated, it was important to know more about its availability and accessibility in these two very different types of activities. As such, they reflect critical choices during the current post method period of L2 teaching, in which teachers, curriculum planners, and other language educators, as well as students, might select from a range of pedagogical options in guiding the acquisition of L2 form, meaning and function (see discussions in Kumaravadivelu 1994; Pica 2000). In addition, the current trend toward specialized and elective courses, particularly at the university level, suggested that negative evidence might be made more readily available to learners, or accessible to them in different ways, depending on the types of activities selected for these courses.

The following questions were therefore addressed:

To what extent is negative evidence available in responses to learners' errors in content-based and grammar-based classroom activities?

How is the negative evidence made available during these activities? Are there consistent patterns in its suppliance and level of explicitness that make it accessible to learners?

In its focus on the availability and accessibility of negative evidence across two different types of classroom activities, the study was also informed by the growing body of research that has connected classroom activities with negative evidence and learning outcomes (see, for example, Doughty and Varela 1998; Lapkin and Swain 1996; Lightbown and Spada 1990; Lyster 1998; Lyster and Ranta 1997; Oliver 1995, 2000). This made it essential to incorporate the construct of activity into the research questions and to identify dominant classroom activities used within each context as a basis for analysis. These methodological matters are discussed in the following section, which includes a description of the classroom contexts, participants, and activities of the study.

Method

Classroom Context

Data were gathered in an intensive, university based English language institute. The classes, which were drawn from elective and core courses in content and grammar, met during 50 to 100 minute blocks of time, four to five times a week, over a seven week period. Six content-based class meetings were studied. Three of the classes focused on literature and culture, as students read and responded to American English literary texts. The other three classes focused on film and American culture, and used videotapes of modern U.S. movies as a basis for its content. Their primary objectives were to promote the learning of English L2 and understanding of American culture. Each content-based class had access to a detailed curriculum guide, which was the outcome of efforts among course developers, course instructors, language institute directors, and others on the teaching staff. Both the literature and film curricula emphasized a range of interactional activities among teachers and students, through class discussion, dialogue journals, student group work, at home projects, and in-class presentation. Grammar lessons were provided as the teachers deemed necessary, both in class, and in feedback on homework assignments.

Six grammar-based class meetings were also studied. Four of the classes were at an intermediate level, and two were at an advanced level. Both held as their primary objective the understanding, application, and devel-

opment of rules and structures of English grammar. Each class had access to a curriculum guide, developed by curriculum developers in cooperation with teaching staff and program directors, which emphasized interaction among teachers and students, grammar use in meaningful contexts, and homework preparation for class activities.

Participants

There were three content and three grammar teachers, all with professional training and experience relevant to the curriculum they were teaching. Two of the teachers from each of these cohorts had specific training and education in applied linguistics and experience with the curriculum they were teaching. The other two teachers were less experienced, but were considered highly qualified to teach in their respective areas.

The students were at advanced and high intermediate levels of English L2 development. In the literature class, a wide range of Asian and European L1 backgrounds and ethnicities was represented. Students in the film and grammar classes were predominantly of Asian L1 backgrounds and ethnicities. There were 10-15 students per class. This range reflects student absences on the days of data collection. Although students in the program often took both content-based and grammar-based classes simultaneously, students in the film and literature classes had already completed the program by the time the grammar students were recorded.

Results of placement and proficiency tests, as well as reports and observations of teachers and program administrators, revealed an overall level of communicative proficiency for students that was consistent with their classroom placements. Despite their overall level of communicative proficiency, however, the students also revealed grammatical imprecisions and inconsistencies in their expression of reference, modality, and information structure, as seen in their article over- and under-suppliance, inappropriate verb tense and aspect marking, and modal mis-selection. Target-like versions of these grammatical features were not emphasized directly in the content-based curricula, but were widely available in oral and written classroom input.

Data Collection

Data collection was carried out through audio and video taping. This was done to insure accurate and detailed transcription. Teachers taught their classes in their usual way and did not know what the focus of this study would be. In the content classes, the dominant activity across classes and teachers was a teacher-directed discussion of literary texts and film. These drew on prior reading assignments, film previewing, and film and text reviewing. Transcripts were made of these discussions. In the grammar-based class the dominant activity which occurred in all classes and with each teacher was the teacher-led sentence construction exercise, often

based on homework as well. Both activities were chosen as primary units for data collection and analysis because of their frequency of occurrence, uniformity of interactional structure, and repeated use in the classrooms, as revealed during several months of observational research prior to the study.

As implemented, these activities often comprised half to three-fourths of the each class meeting time, as other portions of class time were used for classroom management, other kinds of activities, and, in the case of the content-based classes, periodic text re-reading or film re-viewing to support opinions and answers. In the grammar classes, other types of activities included teacher explication of structures, students' questions and group work.

The discussion activity focused on exchange of information, opinions and cultural insights into the text or film content. These were chosen at random from a sample of more than thirty such activities, each initiated through framing utterances such as, "I'd like to talk about..." or "Let's go on to...." This framing utterance served as the initial boundary for the activity. The final boundary was marked either by the end of the class meeting or a teacher utterance such as, "OK, let's move on to...."

The sentence construction exercises required student application of specific grammar structures to prompts from the teacher, a worksheet or realia. The purpose of this activity was to create what were considered correct sentences by filling in the blanks in sets of sentence exercises. These activities were identified not only by their design, but also in the ways they were introduced by the teachers through structuring remarks such as "Your assignment for today was to...; Let's go over those; Let me just play a little game for a minute...; So I want to practice..."

Data Coding and Analysis

All data from the discussion and exercise activities were first coded for teacher and student utterances. Random samples of the data were coded by the researcher and trained coders, each with backgrounds in applied linguistics. Inter-coder agreement was at .98 for utterances. These were coded as units of meaning that followed a single intonation contour and were bounded by pauses. In Figure 3, below, each of the examples of negotiation signals in 3a1 illustrates 1 utterance, while the example for 3b3 illustrates 2 utterances. Initially, agreement for features of negative evidence ranged between .80 and .99. Following careful review of the operationalization of terms and combining of related categories that were difficult to distinguish operationally, agreement reached 100%.

The operationalization, coding, and computing of terms were as follows:

1. Learner non-target productions: These were student-produced utterances that contained one or more errors, and did not conform to target like relation-

ships of L2 form, function, and meaning. Computations were made of their frequency and proportion to the total frequency of learner utterances for each type of language activity.

2. Teacher and peer responses that followed learner non-target productions. These were utterances that followed immediately after learner non-target utterances. Computations were made of their frequency and proportion to the total frequency of learner non-target utterances. Types of responses were described above, with examples shown in Figure 1. Operationalized versions are listed and defined in 2a-c, below. Examples, taken from Figure 1, are shown again in Figure 2.

2a. Teacher and peer response utterances that supplied implicit negative evidence through indirect reference to non target form-meaning relationships in the learner utterances that preceded them. Included in this category were the following:

2a1. Negotiation signals: Responses that indicated general difficulty with the clarity, comprehensibility and completeness of a non-target utterance, and/or requested clarification or confirmation thereof. Examples, which appeared respectively as (1a)-(1b), (1c)-(1f), and (1g) in Figure 1, are listed in Figure 2, as (2a1).

2a2. Recasts: Responses that recast a non-target utterance, simultaneously modifying one or more non-target features, but preserving message meaning. Examples appeared as (1h) and (1i) in Figure 1, and are shown in Figure 2 as (2a2).

2b. Teacher and peer response utterances that supplied explicit negative evidence through direct reference to non target form-meaning relationships in the learner utterances that preceded them. Included in this category were utterances that filled the following functions:

2b1. Responses of corrective feedback through a correct version of all or part of a non-target utterance with explicit articulation that the preceding utterance had some imprecision of form or function. An example appeared as (1j) in Figure 1, and is shown in Figure 2, (2b1).

2b2. Responses of rejection or negative evaluation that indicated that a non-target utterance was incorrect or not quite right, or that learner should try again. An example appears as (2b2) in figure 2.

2b3. Responses that supplied metalinguistic information/ explanation, applied for example, to a description and/or explanation for a non-target utterance. Examples appeared as (1k), and (1l) in Figure 1, and are shown in Figure 2 as (2b3).

2c. Other response utterances from teachers and peers, including utterances of back channeling, topic continuation or switch, agreement, and approval. These have been referred to elsewhere as "Ignore error" by Oliver (1995, 2000); however, the present label was chosen to identify the discoursal function of the response.

2d. Learner non-target utterances followed by no response. These have been referred to elsewhere as "No opportunity" for negative evidence by Oliver (1995, 2000).

Figure 2. Coding used in the Study

Learner Non-Target Utterance	Types of Utterances of Response with Negative Evidence	Examples
The class begin at two	2a Implicit Negative Evidence	
	2a1 Negotiation Signals	
	Signal Indicating Lack of Comprehension	I didn't understand What did you say?
	Clarification Seeking Signal	What about the class? What happens at two? What happens at two? It does what at two?
	Confirmation Seeking Signal	The class begin at two?
	2a2 Recast	Ah the class on film begins at two. The class begins at two 1I
	2b Explicit Negative Evidence	You need to say that the class begins at two
	2b1 Corrective Feedback Utterance(s)	You need to say that the class begins at two
	2b2. Rejection/Negative Evaluation Utterance(s)	You said that incorrectly
	2b3 Utterances with Suppliance of Metalinguistic Information/Explanation	You need to add -s to begin Class is singular. So you need to make begin agree with it
	2c Other utterances of Response	
	Back Channel	uh huh
	Topic Continuation/ Switch	So what are you doing after class?
	Agreement	Yes, I know that
	Approval	It's kind of you to let me know
The class begin at two	3 No Response	
The class end at four After that I study.		

Results

The teachers varied in the amount of time they spent on any one activity. This was taken into account in reporting results both proportionally, in addition to raw frequency counts. The data revealed that negative evidence was available and accessible in responses to learners' non-target productions during both the discussions and sentence construction exercises, but significantly more so during the latter activity. These results are discussed in detail in the sections that follow

Availability of Negative Evidence

There were many student non-target utterances that were not followed by responses of any kind. In these, the students continued to hold the floor. The proportion of learner non-target utterances which were followed by no response utterance was greater for content-based discussion (45%) than for the sentence construction exercise (5%). Thus, as further shown in Table 1, of the 483 non-target utterances that the students produced during content based discussion, only 268, or 55 percent, were followed by one or more response utterances, whereas 215, or 45 percent, received no response utterances at all. On the other hand, during sentence construction exercises, 206, or 95 percent, of students' non-target utterances were followed by one or more response utterances. These differences were significant ($X2 = 108.37$, d.f. = 1, $p<.05$).

As shown in Table 2, negative evidence was available in 79, or 29 percent, of the response utterances to students' non-target productions during content-based discussion. This figure was significantly higher in the sentence construction exercises, where 145, or 70 percent, of response utterances offered negative evidence. ($X2 = 79.86$, d.f.=1, $p< .05$). Across the activities, the remaining "other" responses to students' non-target productions did not provide negative evidence, but were encoded as back-channels, acknowledgments to comments, follow-up questions, and topic continuation moves. In other words, many student non-target utterances were followed by responses that did not focus on their errors. Together with the data on "other" responses from Table 1, these findings indicated that the students received a modest amount of negative evidence on their L2 non-target production during content-based discussion and a substantial, consistent amount during grammar based sentence construction.

Table 1. Frequencies and Proportions of Utterances in Response to L2 Learner Non-Target Utterances

	Content-Based Discussion		Sentence Construction Exercises	
	n	% Response Utterances	n	% Response Utterances
Learner Non-Target Utterances Followed by One or More Response Utterances	268	55%	206	95%
Learner Non-Target Utterances Followed by No Response Utterances	215	45%	11	5%
Total Learner Non-Target Utterances	483		217	

Table 2. Frequencies and Proportions of Utterances with Negative Evidence in Response to Learners' Non-Target Utterances

	Content-Based Discussion		Sentence Construction Exercises	
	n	% Response Utterances	n	% Response Utterances
Response Utterances with Negative Evidence	79	29%	145	70%
Other Response Utterances	189	71%	61	30%
Total Response Utterances	268		206	

Accessibility of Negative Evidence

Accessibility of negative evidence was examined in terms of the consistency and explicitness with which it was supplied. These indicators were based on both the theoretical arguments and empirical data noted above. Findings revealed that the patterns of suppliance of negative evidence were essentially the same in the content-based discussion and the grammar based sentence construction, in that negative evidence was supplied more consistently immediately after students' single utterance answers than during their multi utterance contributions.

based discussion to single utterance contributions. These exercises, by design, directed students to provide short answers to sentence starters and prompts. In the discussions, on the other hand, the students were asked to summarize stories, describe characters, and share opinions and ideas. Thus, the sentence construction activity appeared to be much more successful in providing learners access to negative evidence on their errors.

This contrast can be seen in Excerpts (1) and (2) as compared with Excerpt (3), below. The student's response to a teacher question in a sentence construction activity in Excerpt (1) and the student's completion of a teacher elicitation in Excerpt (2), generated immediate, recast responses by the teacher. The teacher's request for a "thumbnail sketch" about the movie *Stand and Deliver* in Excerpt (3) led to fluent and lengthy reflections on the part of the student. The teacher responded with back-channeling, agreement, and approval. In so doing, the teacher's responses focused on message meaning, but overlooked persistent inconsistencies in agreement, tense marking, and noun phrase morphology in the student's contributions. With respect to verb morphology, as highlighted, the student initially self corrected for noun-verb agreement for the verb give, but then produced errors of agreement and tense consistency for the rest of his text.

Excerpt 1

Teacher	**Student**
	ah, I wrote it
you read it?	the title in Polish is different
(Sentence construction exercise)	

Excerpt 2

Teacher	**Student**
there's another conflict in the mother. Something else is- the mother is thinking a lot about	
	go back China
going back to China is one thing	
(Content-based discussion)	

Excerpt 3

Teacher	**Student**
give me a thumbnail— give me a thumbnail sketch	
	the second one is, eh, the teacher give him, gives him enough time and encouraged him like Patricia said, the teacher give him enough uh
aah uh-huh, uh-huh	

ah	space to let him to feel he can do good that's the most important two points for him and also he pay more attention to uh I mean the teacher pay more attention to Angel—he's one of a closest students of him and he he, the teacher prevents the fighting between Angel and other students that xxx
yeah yeah	teacher if they would ask question he would give ninety nine percent point
yeah yeah, that's right that's right	
(Content-based discussion)	

As shown in Table 3, response utterances of negative evidence were much more likely to be used when learner non-target utterances occurred in single, independent contributions of learners. Thus, in the sentence construction exercises, which by design, sought students' production of single utterance sentence completions, 89 percent of the responses of negative evidence occurred in relation to single independent utterance contributions of the students.

During the content-based discussions, 66 percent of responses with negative evidence occurred when learners made single utterance contributions. Only 18 percent of such responses occurred in the middle of a student contribution of two or more utterances, and only 16 percent occurred at the end of a student contribution of two or more utterances. Similar patterns were found for the sentence construction exercises, but were highly linked with the predominance of independent utterances in the data on this activity.

Table 3. Frequencies and Proportions of Response Utterances with Negative Evidence to Learner Non-Target Utterances in Relation to Discourse Context

	Content-Based Discussion		Sentence Construction Exercises	
Context of Learner Non-Target Utterance	n Response Utterances with Negative Evidence	% Response Utterances with Negative Evidence	n Response Utterances with Negative Evidence	% Response Utterances with Negative Evidence
Independent Utterance	52	66%	129	89%
Text Initial/Medial Utterance	14	18%	9	6%
Text Final Utterance	13	16%	7	5%
Totals	79		145	

In contrast, and as illustrated in bold, in Excerpt 4, the response to a student's meaningful, but grammatically non-target-like, text in the content-based class was more typically a topic related move than a message that offered negative evidence. Again, such moves tended to promote the student's fluency and message modification rather than draw the student's attention to the many agreement imprecisions in her contribution.

Excerpt 4

Teacher	**Student**
	the daughter have a pretty good but she also hope to get married but she think about her mother. so they are worried each other you know so they pretend they think they really have a good life
mm-hmm	**at that time**
mm—hmm	**but when the her mother go to China back and her mother change change his un thinking and being and then uh her daughter think that then she can get married and her mother can independ on others**
really? I had a very different point of view	
(Content-based discussion)	

Just as the discourse which extended across utterances revealed a pattern in responses with negative evidence, a pattern was also evident within utterances. Within content-based discussion there was a tendency toward more frequent suppliance of negative evidence in responses that followed learner utterances with only one non-target feature compared to those with two or more non-target features. As shown in Table 4, of the 79 total response utterances with negative evidence to learners' non-target productions, 61 percent were provided to utterances which had one non-target feature, and 39 percent were provided to utterances of two or more non-target features. This difference was significant ($X2 = 34.60$, d.f. = 1, $p<.05$.), and was reminiscent of Oliver (1995), who found that found differences in responses to learner utterances that contained only one error, but utterances of negotiation of meaning to those with more than one. In her findings, however, the differences were qualitative, with recasts the favored response to utterances with one error, and negotiation to multi-error utterances. Here the differences were quantitative, such that responses of negative evidence were given to single and multiple error utterances, but more responses were given to the former.

Table 4. Frequencies and Proportions of Response Utterances with Negative Evidence in Relation to Non-Target Features in Learner Utterances in Content-Based Discussions

	Learner Non-Target Utterances with 1 Non-Target Feature		Learner Non-Target Utterances with 2+ Non-Target Features	
	n	%	n	%
Response Utterances with Negative Evidence	48	61%	31	39%
Other Response Utterances	124	66%	65	34%
Total Response Utterances	172	64%	96	36%

The data revealed that negative evidence was available and accessible in responses to learners' non-target productions during both the discussions and sentence construction exercises, but significantly more so during the latter activity. For both activities, however, negative evidence was supplied more consistently in response to students' single, than multi- utterance contributions. Implicit, teacher-generated encoding of negative evidence prevailed in both types of activities. These findings are further described and analyzed below.

Encoding of Negative Evidence: Implicitness vs. Explicitness

Table 5 provides a breakdown of findings on implicit and explicit negative evidence provided in response to students' non-target L2 productions and content inaccuracies. This distinction was examined as another indicator of accessibility in light of the findings of Lyster & Ranta (1997) that learners were more likely to notice feedback when it was encoded explicitly.

Across both activities, there was also a far greater proportion of implicit to explicit negative evidence. As shown in Table 5, 86 percent of discussion response utterances with negative evidence were implicit in their encodings, as were 81 percent of the sentence construction responses. No significant difference was found in the in the two types of activities. ($X2 = .78$, $df = 1$, $p > .05$). Implicit negative evidence was the predominant way to encode responses to learner errors.

Table 5. Frequencies and Proportions of Response Utterances with Implicit and Explicit Negative Evidence

	Content Based Instruction		Sentence Construction Exercises	
	n	% Response Utterances with Negative Evidence	n	% Response Utterances with Negative Evidence
Non-Target L2 Productions				
Response Utterances with Implicit Negative Evidence	68	86%	118	81%
Response Utterances with Explicit Negative Evidence	11	14%	27	19%
Total Response Utterances with Implicit & Explicit Negative Evidence	79	35%	145	65%

Implicit negative evidence was supplied primarily through signals of lack of comprehension and confirmation seeking signals. This is illustrated in italics in excerpts (5) and (6), below:

Excerpt 5

Teacher	**Student**
What do you think about this story? Is there anything interesting for you?	Yes. I want to tell something... I think uh in this club in the playing clubs reflects uh human life is a because
ok I didn't quite understand the what, the plain clothes?	playing club, club, club
club?	Yeah
club?	in this club
OK	
(Content-based discussion)	

Excerpt 6

Teacher	**Student**
	my mansion is more (concrete) than the horse
huh? Complete?	
(Sentence construction exercise)	

Recasts were found as responses to learner errors in both types of activities, as shown in italics in excerpts (7) through (9) below. Although two thirds of the recasts in the discussion were used as responses to learners' imprecisions, overall they constituted a small proportion of the response data. Across the six discussions, for example, only eight recasts were used in response to learners' imprecisions and four recasts were used in response to target productions.

Most of the recasts included repetition or segmentation of student utterances. For example, in (8) and (9) the teacher segments "phase of life" and "expensive," then recasts them with the grammatical features consistent with the student's target. Excerpt (7), however, is recast as an expansion that comments on the student's message, as the teacher embeds the student's utterance in a complex clause. Such an expansion of form also expanded the functional role of this utterance, thereby limiting its transparency and accessibility as negative evidence.

Excerpt 7

Teacher	**Student**
	tells him your mother back soon
OK, yeah. he tells him that, uh, his mother will be back soon	
(Content-based discussion)	

Excerpt 8

Teacher	**Student**
	it seems to me like the story about the phase of life or
mm-hm. it could be in – Phases of Life.	
(Content-based discussion)	

Excerpt 9

Teacher	**Student**
	my mansion is expensive...than your camera
more expensive	
(Sentence construction exercise)	

Explicit negative evidence, supplied through corrective feedback, explicit rejection, negative evaluation, and metalinguistic information is shown in italics in excerpts (10) and (11), as the teacher provides information about correct L2 use, more transparently so, however, in Excerpt (11).

Excerpt 10

Teacher	**Student**
wh-wh-that's the right meaningbut what's the right word? anybody know?	the something was too slow
and its re eh?	(process)
it starts with P that's good we're getting there yeah one that equals 'steps.'	
anybody?	to talk about the point? point
no, huh-uh	pace
got it? *OK*	yes

(Content-based discussion)

Excerpt 11

Teacher	**Student**
	report
reported on, or you could have since it's recent, has reported	

(Sentence construction exercise)

Finally, the sentence construction exercises also revealed a distinctive utterance response of re-elicitation, which was not found during content discussion, whereby students were given prompts to encourage reformulation of their messages. The prompt consisted of the teacher repeating the beginning part of the utterance just made by the learner. In all cases, the learners understood that they had to repeat and reformulate their previous utterance. Twelve such responses were found in the data. Although this type of response had not been anticipated as a coding category the original framework for the study, it appeared to serve as an implicit form of negative evidence, and was coded as such. An example from the data is shown in excerpt (12) below:

Excerpt 12

Teacher	**Student**
	what did he wrote?
>what did he...	write
	what, what wrote Cervantes?
>what	what did Cervantes write?

(Sentence construction exercise)

Teachers and Peers as Sources of Access to Negative Evidence:

As revealed in Table 6, negative evidence to students' non-target productions was provided in a far greater amount from teachers than peers. During the content-based discussion, teachers supplied 78 of the 79 response utterances with negative evidence (99%), and 87 percent of such utterances during sentence construction exercises. The pattern of teacher dominance held for all "other" responses to students' non-target productions as well. As shown in Table 5, peer responses were more apparent in this category, constituting 12 percent of the total responses in the content-based discussions and 7 percent in the sentence construction exercises. Thus, in both types of activities, peers responded to their classmates' non-target utterances, but did not supply much negative evidence when they did so.

Table 6. Frequencies and Proportions of Teacher and Peer Response Utterances to Student Non-target Utterances

	Content Based Instruction			Sentence Construction Exercises		
	n	% Response Utterances with Negative Evidence	% Total Response Utterances	n	% Response Utterances with Negative Evidence	% Total Response Utterances
Response Utterances with Negative Evidence						
Teacher	78	99%	30%	124	87%	61%
Peer	1	1%	0%	21	13%	10%
Other Response Utterances with backchannel or topic acceptance, continuation or switch						
Teacher	157		59%	46		22%
Peer	32		12%	15		7%
Total Response Utterances	268		100%	206		100%
Teacher	235		88%	170		82%
Peer	33		12%	36		18%

These results appear to be related to the teacher-directed design and implementation of both activities of the study. They also suggest that peers may not have perceived themselves as helpful or necessary as a source of negative evidence for the two activities. In open-ended discussions, there is great latitude and redundancy in what needs to be said or understood. Transmission of negative evidence on formal inconsistencies is required only insofar as it interferes with message meaning. Given the level of preparation and familiarity of the students with film and text content prior to their discussion, it is likely that only with respect to content itself would they seek clarification. The students who participated in the sentence construction might have believed that the kinds of formal precision required were best monitored by the their teachers' knowledge and training rather than their own evolving proficiency in this area.

Summary and Implications

The questions and concerns of this study are situated within a long standing line of research on input to learners as a source of linguistic data for L2 learning. Most of this research has been centered on the ways in which input can be modified to promote message comprehensibility and provide positive evidence of L2 forms and features. In recent years, research has also considered ways in which interlocutor responses can serve as data source. Of interest have been responses that draw learners' attention to their errors, and provide negative evidence of inconsistencies between error forms and features in their production and target versions in the L2. Experimental, conversational, and classroom contexts have revealed a variety of possible encodings, ranging from explicit expressions of evaluation and correction to implicit feedback through recasts, clarification requests, and confirmation checks.

In light of the diversity of contexts in which negative evidence has been shown to occur, and the variety of ways in which it can be encoded, the present study compared its availability and accessibility in two types of activities: a teacher-led discussion of subject matter content, and a sentence construction exercise. Results of the study revealed that negative evidence was available and accessible in both types of activities, but significantly more so during the sentence construction exercises than the content-based discussion.

During content-based discussion, less than a third of the responses offered negative evidence. Instead, many student contributions, though filled with grammatical imprecisions received responses of back-channeling, agreement, and acknowledgment as to their content appropriateness rather than formal errors. Nearly fifty percent were not given any response at all. In contrast, over two thirds of the responses to students in the sentence construction exercises contained negative evidence, and only six percent did not receive a response.

Despite these differences in the extent to which negative evidence was available and accessible, however, three similarities were found in both activities. First, most of the negative evidence was provided after learner mis-productions that were one utterance long. Secondly, negative evidence was offered more often in teacher, rather than peer, responses. Third, when negative evidence was given in responses, it was predominantly implicit. These consistencies suggest that it is possible for learners to access negative evidence across content-based and grammar-based activities, whether the activities are as open-ended as discussion or close ended as sentence construction, are designed to generate lengthy opinions, or require specific answers.

The activities, themselves, however, posed concerns with respect to their restrictions on response data to students and their input and production needs. First, based on the number of sustained, non-target productions that went un-addressed during the discussions, it is troubling that there were so many mis-productions that were followed by back-channeling, acknowledgment, or agreement, or no response at all. Additionally problematic was that the predominant context for suppliance of negative evidence in both activities was the limited, utterance-level production of the students. The activities, as implemented, appeared to restrict responses with negative evidence for the sake of students' output or limit their production of output for the sake of responses to them.

These observations suggested ways in which the activities might be modified or augmented to help students notice their errors and modify their subsequent output. One way to do this would be for teachers to respond to students' imprecisions with implicit and negotiation generating negative evidence throughout their lengthy text productions, as a way of encouraging the students to speak, but letting them know they were not precise.

It might be possible, for example, to supplement or substitute the back-channeling, acknowledgment, and other responses found in the background of the lengthy texts of Excerpts (3) and (4) with moves which supply negative evidence through form focusing recasts, as suggested by Doughty & Varela (1998), or through the negotiation of form, as suggested by Lyster & Ranta (1997). In (3a) and (4a), repeated from excerpts (3) and (4), the teachers fully understood the students, but the places where there were back-channels and comments might be used as insertion points for responses of negative evidence, here encoded as recasts and clarification requests, in bold.

Example (3a)

Teacher	**Student**
give me a thumbnail— give me a thumbnail sketch	

	the second one is, eh, the teacher give him, gives him enough time and encouraged him like Patricia said, *the teacher give him enough uh*
aah uh-huh, uh-huh ah **yes she gave him enough** what?	space to let him to feel he can do good that's the most important two points for him and also he pay more attention to uh I mean the teacher pay more attention to Angel—he's one of a closest students of him and he he, the teacher prevents the fighting between Angel and other students that xxx
yeah yeah **he was one of the closest students to him**	teacher if they would ask question he would give ninety nine percent point
yeah yeah, that's right that's right **if they would ask questions he would give ninety nine points**	

(Content-based discussion)

Example (4a)

Teacher	**Student**
	the daughter have a pretty good but she also hope to get married but she think about her mother. So they are worried each other you know so they pretend they think they really have a good life
mm-hmm **they are worried each other? What do you mean?**	at that time

(Content-based discussion)

Similarly, during sentence construction, it might be possible to encourage text production in an area of prior imprecision, including additional negative evidence moves as follow up. Excerpt (1) is repeated, but in bold.

Example (1a)

Teacher	**Student**
	ah, I wrote it
you read it? **Tell me about it. Can you give me a thumbnail sketch?**	the title in Polish is different.

(Sentence construction exercise)

In addition to introducing responses of negotiation of form, another possibility would be to employ activities that require precision of form and content, unlike discussion, which does not require such formal accuracy to succeed. Closed, information exchange tasks are especially conducive to this outcome (see Pica, Kanagy, & Falodun 1993).

For example, students might be asked to reconstruct an excerpt from a plot summary by pooling individual sentences and placing them in order of occurrence, in jig-saw or strip story format. Or they might be asked to participate in a dictogloss task, taking notes on the plot summary, then using the notes to collaborate in reconstructing the original summary. As other research has shown, during their collaboration, there is a possibility that they will be given responses of negative evidence when they have failed to indicate distinctions in time, through mis-selection of verb inflections or mis-application of grammatical rules (see again, Swain 1995; Pica, Billmyer, Julian, Blake-Ward, Bucchheit, Nicolary, & Sullivan 2001).

Because the sentence construction activity generated a good deal of negative evidence in response to student imprecisions, but did so with brief portions of sentences and invited little sustained speech on the students' parts, it must also be modified when it is used to promote these important dimensions of L2 learning. Making such exercises less teacher-led and more peer collaborative as well as requiring students to justify their answers to each other in small groups and to their class as a whole, might help students to notice grammatical imprecisions and inconsistencies, and discuss them metalinguistically. The task designs of Loschky & Bley-Vroman (1990) reflect this need.

Results of the present study remind us of the important role of activity in generating the kinds of input needed for L2 learning. The two activity types of the study, discussion and sentence construction, are common practices in so many classrooms, not only those of the current study. Although not always embraced wholeheartedly for their role in assisting L2 learning, the activities remain common classroom staples. Indeed they have much to offer both learner and teacher with respect to classroom communication, preparation, and management, and with these few suggested enhancements, might be even more beneficial for L2 learners as they cope with their errors. As students' need for negative evidence on their imprecisions becomes recognized as a process critical to their L2 learning, modification of existing materials and adjustment of classroom practice will become increasingly necessary. The findings of the present study, it is hoped, can be of help in that regard.

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